# HIDDEN RECTAL CLEANING APPARATUS AND BIDET

## DESCRIPTION

### Field of the Invention

This invention is related to the hidden bidet and rectal cleaning aparatus, which are used in the closets for hygienic purposes.

### Background of the Invention

The closets including the rectal cleaning pipes and bidets of rectal cleaning purposes are produced since longtime. In the prior art, it is known several rectal cleaning and bidet systems installed to the closet or closet cover.

The pollution of the outer surface of the rectal cleaning and bidet pipes during the utilization causes aesthetic and hygienic problems. It exists also the mobile rectal cleaning and bidet systems in the prior art, which operate according to different principles in order to overcome these problems. The mobile rectal cleaning pipes and bidets are installed to the closet or closet cover and in case of usage; they move forward within the body and become active. Therefore, the pollution of the outer surface is prevented to great extent.

In the prior art, the movement of the cleaning pipe or bidet pipe is provided by electrical engine located in the body and stimulated by a gear connected to this engine. In case of usage, first the electrical engine is switched on and then the cleaning or bidet pipe comes out of the body. At the end of the usage, the cleaning pipe or bidet enters into the body by the help of the electrical engine.

Another application within the prior art is that the movement of the cleaning pipe or bidet is completely provided by the washing water force. In the Japanese patent numbered JP 2001193130, it is used as two pieces rectal cleaning and bidet pipe which are located in one cylindrical body. That is why it is used two channels in this rectal cleaning-bidet system. There are also five different water accesses on the cylindrical body. Since the bidet and rectal cleaning are on the same channel, during the usage, it is possible that the other unused nozzle is polluted and the dirt can

stiffen. Also, it does not exist pre-usage and post-usage washing system within this system.

**Object of the Invention**

This invention aims to provide the cleaning of the outer surface of the hidden rectal cleaning or bidet system which serves to do hygienic washing as well as the cleaning-bidet pipe within this system during the process of opening by the washing water pressure for usage and of closing after the usage by the spring.

**Detailed Description of the Invention**

The system subjected to the invention is indicated in the attached figures and the explanation is here below;

Figure 1. The perspective view of the rectal cleaning apparatus.

Figure 2. The perspective view of the rectal cleaning apparatus' section in passive mode.

Figure 3. The perspective view of the rectal cleaning apparatus' section in active mode.

Figure 4. The side view of the rectal cleaning apparatus' section in active mode.

Figure 5. The perspective view of the bidet's section in active mode.

Figure 6. The perspective view of the bidet and rectal cleaning apparatus which are installed to the closet in juxtaposition.

Figure 7. The perspective view of the lower body of bidet or rectal cleaning apparatus which has grooved form.

Figure 8. The perspective view of the rectal cleaning pipe which has feathered form.

Figure 9. The perspective view of the lower body of bidet or rectal cleaning apparatus which has grooved form and the rectal cleaning pipe which has feathered form after the installation.

Each of the parts numbered at the figures are indicated here below.

A. Rectal cleaning Apparatus
B. Bidet
1. Upper body water access
2. Upper body
3. Mobile stopper

4. Pipe backward stopper
5. Impermeable felt
6. Pressure Spring
7. Spring Dwelling Surface
8. Lower body protrude a
9. Lower body protrude b
10. O-ring
11. Water access drain hole
12. Lower body stopper
13. Lower body water access
14. Water exit drain
15. Lower body
16. Rectal cleaning pipe
17. Lower body connection lug
18. Gasket
19. Bidet exit nozzle
20. Rectal Cleaning exit nozzle
21. Fixing strut
22. T piece
23. Feeding pipe
24. Back hole
25. Front hole
26. Lower body O-ring operation surface
27. O-ring drain
28. Upper body water flow hose
29. Lower body water flow hose
30. Lower body pipe exit
31. Upper body connection lug
32. Gasket slot
33. Impermeable felt dwelling surface a
34. Impermeable felt dwelling surface b
35. Mobile stopper long part
36. Mobile stopper short part
37. Mobile stopper protrude
38. Bidet pressure spring dwelling surface

39. Bidet pipe
40. Bidet pressure spring
41. Fixing drain
42. Fixing feather
43. Spring protrude
44. Lower body with grooved form
45. Rectal cleaning pipe with feathered form

As shown in Figure 1, water arrives via three-way valve located in closet system into the mentioned rectal cleaning apparatus (A). The water comes to the three-way valve from the main water access valve. One of the spout of the mentioned three-way valve is connected to the rectal cleaning apparatus (A) and the other one to the bidet (B) (bidet (B) is shown in the figures 5-6) through different feeding drains (23). The feeding drain (23), is connected to the upper body water access (1) and lower body water access (13) by the help of a T piece (22). The user can switch the rectal cleaning or bidet by the help of three-way valve which provides the continuous flow and functions as the deflection valve. When the rectal cleaning apparatus (A) is in active mode, the bidet (B) is in passive mode or vice versa. When the main water access valve is closed the water flow to the three-way valve is prevented. The three-way valve is only used to change the direction of water flow.

As shown in Figure 1, the invented rectal cleaning apparatus (A), has two different water access point as being upper body water access (1) and lower body water access (13) and is composed of a upper body (2) and a lower body (15) fixed to the upper body. The upper body water access (1) which is at upper body (2) ensure the movement of the rectal cleaning apparatus (A) while the lower water access (13) which is at lower body (15) let the rectal cleaning apparatus (A) to do the cleaning function.

As shown in Figure 2 and figure 3, the empty cylindrical lower body (15) of the rectal cleaning apparatus (A), includes the rectal cleaning pipe (16) which operates as a washing element that can move forward within the lower body by the water pressure, the pressure spring (6) which helps the rectal cleaning pipe (16) to return to the passive mode following the washing operation and the pieces used for the impermeability purposes such as impermeable felt (5), mobile stopper (3), o-ring (10) and gasket (18).

As shown in Figures 2, 3 and 4, the lower empty cylindrical body (15) of the mentioned rectal cleaning apparatus (A); is composed of one or more lower body connection lug (17) at one end, the lower body protrude a (8) resulted by the narrowing of the diameter near the other end, in addition to this, lower body protrude b (9) resulted by a second narrowing of diameter on which one of the pressure spring (6) ends leans and at the other end, the lower body stopper (12) resulted again by a narrowing of diameter, the lower body pipe exit (30), the lower body o-ring operation surface (26) located between the lower body protrude b (9) and lower body stopper (12), the lower body water access (13) linked to the lower body o-ring operation surface (26), the front hole (25) where the pressure spring (6) is located, the back hole (24) near the upper body and the fixing strut (21) which is in the form of a protrude snag outside the lower body (15) and which facilitate the installation of the rectal cleaning apparatus (A).

As shown in Figures 2, 3 and 4, the empty cylindrical upper body (2) of the mentioned rectal cleaning apparatus (A) with one closed one open end which is connected to the lower body (15) includes the upper body water access (1) and one or more upper body connection lugs (31) located at the open end of the upper body (2) and linked to the lower body connection lugs (17).

As shown in Figures 2, 3 and 4, the rectal cleaning pipe (16) of the mentioned rectal cleaning apparatus (A) is composed of the water exit drain (14), the protrude spring dwelling surface (7) located in the middle of the rectal cleaning pipe (16) on which one of the pressure spring's (6) end leans; the rectal cleaning exit nozzle (20) linked to the water exit drain (14) which is located at one end of the rectal cleaning pipe (16), the o-ring drain (27), the gasket slot (32), the water access hole (11) which links the water flow coming from the lower body water access (13) to the water exit drain (14) and located between the o-ring drain (27) and gasket slot (32), impermeable felt dwelling surface a (33) and impermeable felt dwelling surface b (34) and the pipe backward stopper (4).

As shown in Figures 2, 3 and 4, the o-ring drain (27) of the rectal cleaning apparatus (A) which is located within the rectal cleaning pipe (16) in which the o-ring (10) is located; is at the position to ensure the gasket (18) leaning the lower body stopper

(12) when the rectal cleaning pipe (16) becomes active mode (fully open) in the position to be equivalent to the o-ring operation surface (26) and also when the gasket slot (32) where the gasket (18) is located within the rectal cleaning pipe (16) and the rectal cleaning pipe (16) becomes active (fully open).

As shown in Figures 2, 3 and 4, at one end of the rectal cleaning pipe (16) of the mentioned rectal cleaning apparatus (A) there are protrude impermeable felt surface a (33) where the impermeable felt (5) is located and the impermeable felt dwelling surface b (34) which fix the felt; a pipe backward stopper (4) in the form of snag which preserve the mobile stopper (3) integrated to the impermeable felt dwelling surface b (34) as well as helping the rectal cleaning pipe (16) to stay leaned to the upper body (2) when the rectal cleaning pipe (16) becomes passive by being pushed backward through the pressure spring (6).

As shown in Figures 3 and 4, the mobile stopper of the mentioned rectal cleaning apparatus (A) has a long cylindrical body and a mobile stopper protrude (37) which divide this body into two part as mobile stopper long part (35) and mobile stopper short part (36) and which protects the water pressure at the back hole (24) by preventing the water flow from the back hole (24) to the water exit drain (14). The mobile stopper long part (35) is placed at the drain backward stopper (4) side of the water exit drain (14).

The operation method of the rectal cleaning apparatus (A) used in the closet system of which the inner structures are shown at the Figures 2, 3 and 4 in a detailed way are explained here below.

In order for the water coming from the upper body water access (1) to push the rectal cleaning pipe (16) it should overcome the pressure spring (6) force. One end of the pressure spring (6) relies on the spring dwelling surface (7) which is integrated with the rectal cleaning pipe (16) and the other end on the lower body protrude b (9). The water stuck at the back hole (24) is prevented to pass to the front hole (25) by the impermeable felt (5). By the help of the impermeability features of the mobile stopper (3) and impermeable felt (5) there is no time loss at the period of opening and functioning of the rectal cleaning pipe (16) without the loss of pressure. The rectal cleaning pipe (16) pushed forward by the pressure of the water coming from the

upper body water access (1) comes out of the rectal cleaning apparatus (A) hidden within the closet system. The spring dwelling surface (7) within the rectal cleaning pipe (16) moving forward, leans to the lower body protrude a (8) and the pressure spring (6) is congested between the lower body protrude a (8) and lower body protrude b (9). The gasket (18) which is on the rectal cleaning pipe (16) moving forward, leans against the lower body stopper (12) and prevents the water coming from the lower body water access (13) to get out from the lower body pipe exit (30). When the rectal cleaning pipe (16) becomes active (fully open), the o-ring placed in the o-ring drain (27) which is on the rectal cleaning pipe (16), prevents the water coming from lower body water access (13) to get into the front hole (25) by digging itself into the lower body o-ring operation surface (26) in an impermeable way. In this way, the water coming from the lower body water access (13) reaches to the water exit drain (14) placed in the rectal cleaning pipe (16), through the water access drain hole (11) meeting the lower body water access (13). The water entering from the upper body water access (1) does not come to the water exit drain (14) due to the mobile stopper (3). The water flow between the back hole (24) and front hole (25) of the rectal cleaning apparatus (A), placed in its lower body (15) is directly prevented by the impermeable felt (5).

As shown in Figure 1, in the mentioned rectal cleaning apparatus (A), water comes to a T piece through the feeding pipe (23). The lower body water flow hose (29) linked to the lower body water access (13) and upper body water flow hose (28) linked to the upper body water access (1) are connected to each other by the mentioned T piece (22). The water passing through the upper body water flow hose (28) and upper body water access (1) push the rectal cleaning pipe (16) forward as shown in Figure 3 by filling into the back hole (24) as shown in Figure 4. Before the rectal cleaning pipe (16) is active (fully open) the water flow in the lower body water flow hose (29) linked to the lower body water access (13) is just in the form of leakage. When the rectal cleaning pipe (16) is active (fully open), the axis of the lower body water access and the water access drain hole (11) which is on the rectal cleaning pipe (16) intersect. The water which does not trickle out of the lower body pipe exit (30) by the help of the gasket (18) and to front hole (25) by the help of o-ring (10), enters to the water access drain hole (11) and water exit drain (14) by lower body water access (13) and comes out through the rectal cleaning exit nozzle

(20) via the water exit drain (14). In this way, the normal water regime in other words the water flow required for the rectal cleaning and washing is provided.

As shown in Figure 2, in the mentioned rectal cleaning apparatus (A); as soon as the water reaches to the upper body water access (1) at the normal flow, it also reaches to the lower body water access (3) as a leakage. The water access drain hole (11) located on the rectal cleaning pipe (16), which is not active, or fully open position, gets behind the lower body water access (13). At this position, the water leaking into the front hole (25) where the pressure spring (6) is, reaches the water access drain hole (11), passes through the water exit drain (14) and gets out by leaking through the rectal cleaning exit nozzle (20) and the rectal cleaning pipe (16) by leaning since the gasket (18) does not close the lower body pipe exit (30) by leaning to the lower body stopper (12) yet. In other words, the normal regime water flow is not provided yet. The leakage on the rectal cleaning pipe (16), makes the rectal cleaning pipe (16) greasy and let it to comes out of the lower body pipe exit (30) easier and quicker. This leakage, also ensures the cleaning of the outer surface of the rectal cleaning pipe (16) before the usage.

As shown in Figures 3 and 4, in the mentioned rectal cleaning apparatus (A); the rectal cleaning pipe (16) opening fully due to the water coming from the upper water access (1) sit on the lower body o-ring operation surface (26) of the o-ring (10) and lower body stopper (12) of the gasket (18) in a impermeable way and when the water access hole (11) and lower body water access (13) on the rectal cleaning pipe (16) overlap, the water coming from the lower body water access (13) gets out from the rectal cleaning exit nozzle (20) by passing through the water exit drain (14). The rectal cleaning exit nozzle (20) is mono-porose and the water gushes without spreading.

As shown in Figure 1, the closure or getting into passive mode of the mentioned rectal cleaning apparatus (A) happens by the interruption of the water pressure coming from the feeding pipe (23) by decreasing the its flow. The water of which the pressure is decreased located in the upper hole (24) comes to the T piece (22) through upper body water access (1) and upper body water flow hose (28) by being pushed backwards by the pressure spring (6) and then arrives to the lower body water flow hose (29) and lower body water access (13). When the pressure spring

(6) push the rectal cleaning pipe (16) backwards, the o-ring (10) split from the lower body o-ring operation surface (26) and the gasket (18) split from the lower body stopper (12). Meanwhile, water coming to the lower body water access (13), gets into the front hole (25) is evacuated from the rectal cleaning exit nozzle (20) by passing through the water access drain hole (11) and water exit drain (14) and also in the meantime by during the evacuation, the leaking water from the lower body pipe exit (30) ensures the cleaning of the outer surface of the rectal cleaning pipe (16) after the usage.

In Figure 5, the perspective view of the invented bidet's (B) section at active mode is indicated.

There are common mechanical features and/or parts, which constitute the rectal cleaning apparatus (A) shown in Figures 1, 2, 3 and 4 and the bidet (B) shown in Figure 5. The mentioned mechanical features and/or parts such as; upper body water access (1), upper body (2), mobile stopper (3), pipe backward stopper (4), impermeable felt (5), lower body protrude a (8), lower body protrude b (9), o-ring (10), water access drain hole (11), lower body stopper (12), lower body water access (13), water exit drain (14), lower body (15), lower body connection lug (17), gasket (18), fixing strut (21), T-piece (22), feeding pipe (23), back hole (24), front hole (25), lower body o-ring operation surface (26), o-ring drain (27), upper body water flow hose (28), lower body water flow hose (29), lower body pipe exit (30), upper body connection lug (31), gasket slot (32), impermeable felt dwelling surface a (33), impermeable felt dwelling surface b (34), mobile stopper long part (35), mobile stopper short part (36), mobile stopper protrude (37) are both used in the rectal cleaning apparatus (A) and bidet (B) for the same purposes.

The operation methods of the bidet (B) and the rectal cleaning apparatus (A) are identical and all the mechanical parts which constitutes the rectal cleaning apparatus (A) and bidet (B) are same except few difference. As shown in Figure 5, in the invented bidet (B), different from the rectal cleaning apparatus (A), there exists no protrude spring dwelling surface (7) like in the rectal cleaning pipe (16) at the middle of the bidet pipe (39). In the bidet (B), the bidet pressure spring (40) leans to the bidet pressure spring dwelling surface (38) which looks to the front hole (25) of the impermeable felt dwelling surface a (33). In addition to this, the lengths of the rectal

cleaning pipe (16) and bidet pipe (39) that gets out are different. Since the bidet pressure spring dwelling surface (38) on the bidet pipe (39) gets behind the spring dwelling surface (7) in the rectal cleaning pipe (16), the bidet pipe (39) moves forward more than the rectal cleaning pipe does (16). Another difference between the rectal cleaning apparatus (A) and bidet (B) is that the bidet pressure spring (40) of bidet (B) is longer than the pressure spring (6) in the rectal cleaning apparatus (A). Also, the difference of bidet exit nozzle (19) from the rectal cleaning exit nozzle (20) is that the bidet exit nozzle (19) has an angle and the water jets due to the little holes of the nozzle. The rectal cleaning exit nozzle (20) has a mono-porose form and the water gushes out without spreading.

During the usage, when the rectal cleaning pipe (16) and the bidet pipe (39) get fully out, the water entering from the lower body water access (13), passes through the water access drain hole (11) and comes out of the rectal cleaning exit nozzle (20) in rectal cleaning apparatus (A); it comes out of the bidet exit nozzle (19) in bidet. The rectal cleaning apparatus (A) or bidet (B) realize the normal washing by ensuring the normal regime water flow in other words the flow of water required for the cleaning and washing only at this position. At this position, since there is not a leakage from the lower body pipe exit (30), the outer surface of the rectal cleaning pipe (16) or bidet pipe (39) cannot be cleaned. The operation of the cleaning of the outer surface of the rectal cleaning pipe (16) or bidet pipe (39) is realized while the rectal cleaning pipe (16) or bidet pipe (39) comes out of the lower body (15) or entering in the lower body (15).

In Figure 6, the perspective view of the bidet (B) and the rectal cleaning apparatus (A) are shown as installed to the closet in juxtaposition.

In Figure 7, the lower body with grooved form (44) of the bidet (B) and rectal cleaning apparatus (A) is shown. The difference of the lower body with grooved form (44) from the above mentioned lower body (15) is the existence of the fixing drain (41) at the at least one or preferably two side of the lower body pipe exit (30).

In Figure 8, the rectal cleaning pipe with the feathered form (45) is shown. The difference of the rectal cleaning pipe with the feathered form (45) from the above mentioned rectal cleaning pipe (16) is the existence of the fixing feather placed at

least one or preferably two sides of the rectal cleaning pipe with the feathered form (45).

Also, in the rectal cleaning pipe with the feathered form (45) shown in Figure 8, there are spring dwelling surface (7) and a spring protrude (43) on which one or more pressure springs (6) in the form of snag lie, located between the o-ring drain (27). The spring protrude (43) is composed in the way to tolerate the diameter difference between the pressure spring (6) and the rectal cleaning pipe with the feathered form (45). In other words, by composing passage space tolerance between the inner diameter of the pressure spring (6) and the outer surface of the spring protrude (43), the pressure spring (6) axis and the rectal cleaning pipe with the feathered form (45) overlap. So that, by eliminating the pivotal crookedness of the pressure spring (6) according to the rectal cleaning pipe with the feathered form (45), the pressure spring is prevented to move in radial direction and generating noise during the operation in the surfaces where the pressure spring (6) sit, in the lower body protrude b (9) and spring dwelling surface (7) due to the pivotal crookedness therefore it operates easier. The spring protrude (43), apart from the rectal cleaning pipe with the feathered form (45) can be applied to the rectal cleaning pipe (16) alternatively. The rectal cleaning pipe with the feathered form (45) can be composed without the spring protrude (43) as shown in Figure 8.

In Figure 9, it is seen the position of the lower body with grooved form (44) and the rectal cleaning pipe with the feathered form (45) following the installation. The fixing feathers (42) are placed in the fixing drains (41). The fixing drains (41) are positioned better with the help of fixing feathers (42) during the movement of the rectal cleaning pipe with the feathered form (45). In Figure 7-9, the lower body with grooved form (44) and the rectal cleaning pipe with the feathered form (45) are the mechanical parts developed as an alternative to the lower body (15) and the rectal cleaning pipe (16) respectively. It is possible to compose an alternative rectal cleaning apparatus by using the lower body with grooved form (44) and the rectal cleaning pipe with the feathered form (45) without any modification in the rectal cleaning apparatus (A).

Also, like in the rectal cleaning pipe with the feathered form (45), it is possible to compose an alternative bidet pipe by using fixing feather (42) at one or preferably two side of the bidet pipe (39). It is possible to develop an alternative bidet (B) by

using the lower body with grooved form (44) and the mentioned alternative bidet pipe where the fixing feathers (42) rest in the fixing drains (41) without any modification in the bidet (B).

The spring protrude (43) can also be used in the bidet (B). The spring protrude (43) is composed on the bidet pipe (39) or bidet pipe with feathered form between the bidet pressure spring dwelling surface (38) and o-ring drain (27).

Also, as an alternative to the mobile stopper (3) used in the rectal cleaning apparatus (A) and bidet (B); by plugging completely the place where the mobile stopper (3) rests at drain backward stopper (4) side of the water exit drain (14) in the rectal cleaning pipe (16) and bidet pipe (39) or by producing closed, it is possible to provide the impermeability without using the mobile stopper (3) and the alternative rectal cleaning pipe (16) and bidet pipe (39) can be produced.

The preferred rectal cleaning apparatus (A) and bidet (B) mentioned here above are not restrictive to the extent of protection of the invention. The modifications on this preferred rectal cleaning apparatus (A) and bidet (B) which will be realized in direction of the explanations of the invention should be evaluated within the extent of protection of the invention.